

Work Order ID 85384

June-07-12 9:25:05 AM

85384

Page 1

Item ID: D3560-042

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Arm Weldment

Start Date: 07/06/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 21/06/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/06/07 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3560

Rev D

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blanks 16.750" long

110

0.00

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1- Mill as per Folio FA694 Rev: AA & Dwg D3560 Rev: D
2-C'sink 0.196" hole on manual mill as per dwg D3560
3-Deburr per dwg D3560

120

0.00

120

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

W/O: 85384

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3560-042 PAR #: _____ Fault Category: Machining NCR: Yes No QA: Star Date: 12/9/10
 Resolution: _____ Disposition: Scrap QA: N/C Closed: OK Date: 12/9/10

NCR: <u>12-1780</u>		WORK ORDER NON-CONFORMANCE (NCR) <u>\$130.37</u>						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>12-16-20</u>	<u>110</u>	<u>2 parts .188⁺-.010 floor thickness are .202-.206 and .250 deep C-Bore⁺-.010</u>	<u>CP</u> <u>12/16/25</u>	<u>Acceptable</u>	<u>SL</u> <u>12-06-20</u>	<u>OK</u> <u>12/06/25</u>	<u>CP</u> <u>12/16/25</u>	<u>WHL</u> <u>12-06-25</u>
		<u>are .234, tooling lifted while machining, should of used 2 rices!</u>	<u>CP</u> <u>12/16/25</u>	<u>WHL</u>			<u>CP</u> <u>12/16/25</u>	<u>WHL</u> <u>12-06-25</u>
<u>12/16/25</u>	<u>110</u>	<u>One part has gouge near pivot hole. 2 C raw material</u>	<u>CP</u> <u>12/16/25</u>	<u>SCRAP. CRITICAL AREA.</u>	<u>SL</u> <u>12-06-25</u>	<u>OK</u> <u>12/06/25</u>	<u>CP</u> <u>12/16/25</u>	<u>WHL</u> <u>12-06-25</u>

NOTE: Date & initial all entries

WHL
09/10/12

Work Order ID 85384

85384

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N900040100

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6

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Required Date: 21/06/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

only 12/06/25

5

0

140

Large Fab

0.00

140

Large Fab

Memo

0.00

Large Fab

1-Weld assembly as per dwg D3560

STEP:

1- clean material (buff bracket and bottom of arm with blue pad)

2- set up bracket and arm on jig

3- preheat bracket and arm with torch

4- clean before welding with brush

5- set up machine to 135 amps

6- weld across bottom and top ends

7- reheat with torch (65 deg C)

8- on one side weld from bottom to top half way

9- same for other side (half way)

10- from half way point weld the rest of the first side (ease off pedal near end)

11- same for remaining side (ease off pedal near end)

5

0

12-08-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start ***NR1***

QC: Date: SPC (Y/N): Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 SmB 0.00 12-8-31	DAS 16 12/08/31			3			
160 *160* QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds Memo	0.00 0.00				5	0	12-08-30	DAS 18 12-08-30
170 *170* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00				5x	f	12/08/31	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start ***NR1***

QC: Date: SPC (Y/N): Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC3- Inspect Part Finish	0.00							
180									
QC	Memo	0.00							
Quality Control									
190	Small Fab	0.00							
190									
Small Fab	Memo	0.00							
Small Fab	1-Press bushing in D3560 arm per dwg D3562								
200	QC5- Inspect part completeness to step on W/O	0.00							
200									
QC	Memo	0.00							
Quality Control									

5X Ø

mt
12/29/04

5x

ES 2/09/04

5

Smb
12.9.4

DAS
16

17/09/04

-042

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NS1

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Stop

NS2

Start Date: 07/06/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 21/06/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

210

Identify as per dwg & Stock Location: WA

0.00

210

Packaging

Memo

0.00

Packaging

*** STOCK IN STEP CELL ***

5 12/9/04

220

QC21- Final Inspection - Work Order Release

0.00

220

QC

Memo

0.00

Quality Control

12/9/04

ME
12-09-04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-07-12 9:25:09 AM

Page 1

Work Order ID: 85384

85384

Parent Item: D3560-042

D3560-042

Parent Item Name: Arm Weldment

Start Date: 07/06/2012

Required Date: 21/06/2012

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP Rev:A New Issue 07.05.24 EC
IPP rev B ECN 987 07.10.09 EC verified by: DD
IPP Rev:C ECN1048 07-12-18 DD verified by: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2808

Manufactured

No

100

Each

8.0000

1

6

D2808

Bushing

**

Location

Loc Qty

Loc Code

GA

8

32896

2

79688

6

M6061T6B0.500X05.00
0

Purchased

No

140

f

66.2534

1.395

8.810526

M6061T6B0 500X05 000

6061-T6 Bar .500 x 5.00

**

Location

Loc Qty

Loc Code

MAT001

1.16

119346

1.16

MAT004

65.0934

120243

0.2

120421

2.5934

120866

0.3

121040

14

121070

12

→ 121282

36

8.82 OK 12/04/05

EB 12/09/04
382018 (52)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

June-07-12 9:25:09 AM

Page 2

Work Order ID: 85384

85384

Parent Item: D3560-042

D3560-042

Parent Item Name: Arm Weldment

Start Date: 07/06/2012

Required Date: 21/06/2012

Start Qty: 6.00

Required Qty: 6.00

D3592-1

Manufactured No

190

Each

30.0000

1

6

D3592-1

12.08.30

Plate

Location

Loc Qty

Loc Code

WA

28

80379

28

WA002

2

47015

2

5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 85384
Description: Arm		Part Number: D3560-2
Inspection Dwg: D	Rev: D	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.507	+0.000/-0.001	5065	/		DT 9526-E	
Ø0.196	+0.005/-0.001	197	/		vech	11-10
Ø1.000	+0.010/-0.001	1.005	/		"	
0.500	+/-0.010	496	/		"	
0.250	+/-0.010	251	/		"	
0.275	+/-0.010	276	/		"	
0.188	+/-0.010	194	/		mic	118-120
2.000	+/-0.010	2.000	/		vech	
1.700	+/-0.010	1.700	/		"	
Ø0.385 x 100°	+/-0.010 x 0.5°	380x100°	/		"	
0.250 Deep	+/-0.010	247	/		"	

Measured by: JH
Date: 12-06-20

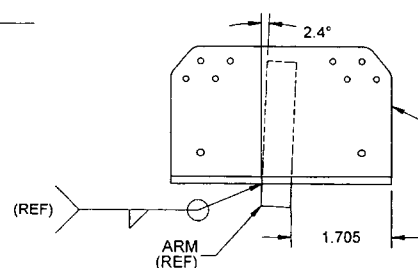
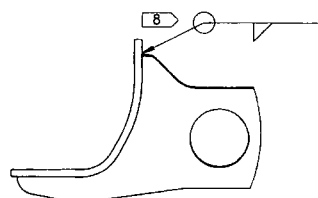
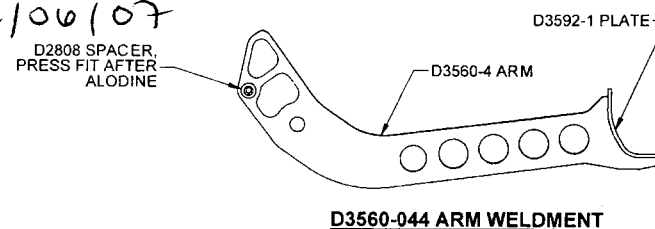
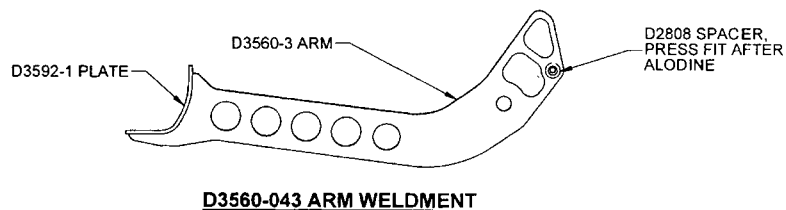
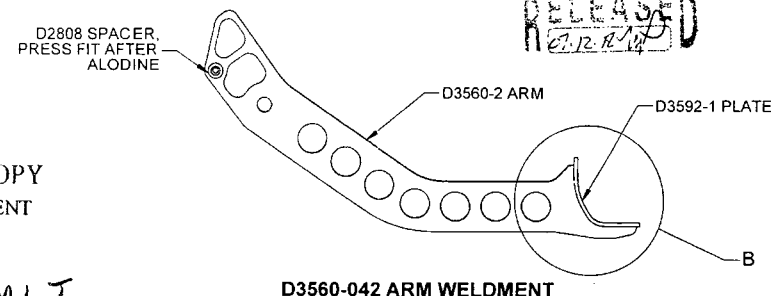
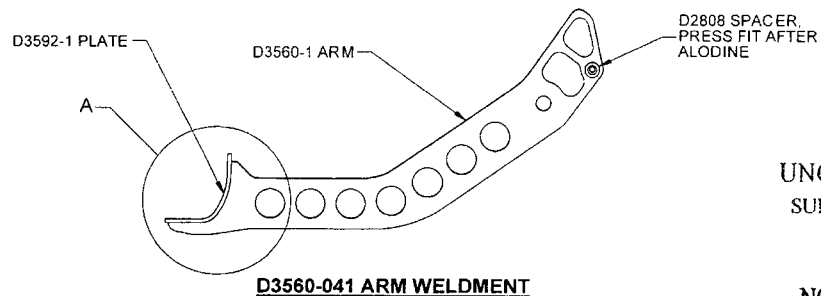
Audited by: anf
Date: 12/06/25

Prototype Approval: N/A
Date: N/A

Rev	Date	Change	Revised by	Approved
A	07.01.17	New Issue P/O D3560-042	KJ/JLM	
B	07.06.13	Dimensions updated per Dwg Rev B	KJ/JLM	
C	09.06.11	Dwg Rev updated	KJ	

RELEASED

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 85384 MLJ
12/06/07



PARTS LIST

QTY -041	QTY -042	QTY -043	QTY -044	P/N	DESCRIPTION
X				D3560-041	ARM WELDMENT
	X			D3560-042	ARM WELDMENT
		X		D3560-043	ARM WELDMENT
			X	D3560-044	ARM WELDMENT
1	1	1	1	D2808	SPACER
1				D3560-1	ARM
	1			D3560-2	ARM
		1		D3560-3	ARM
			1	D3560-4	ARM
1	1	1	1	D3592-1	PLATE

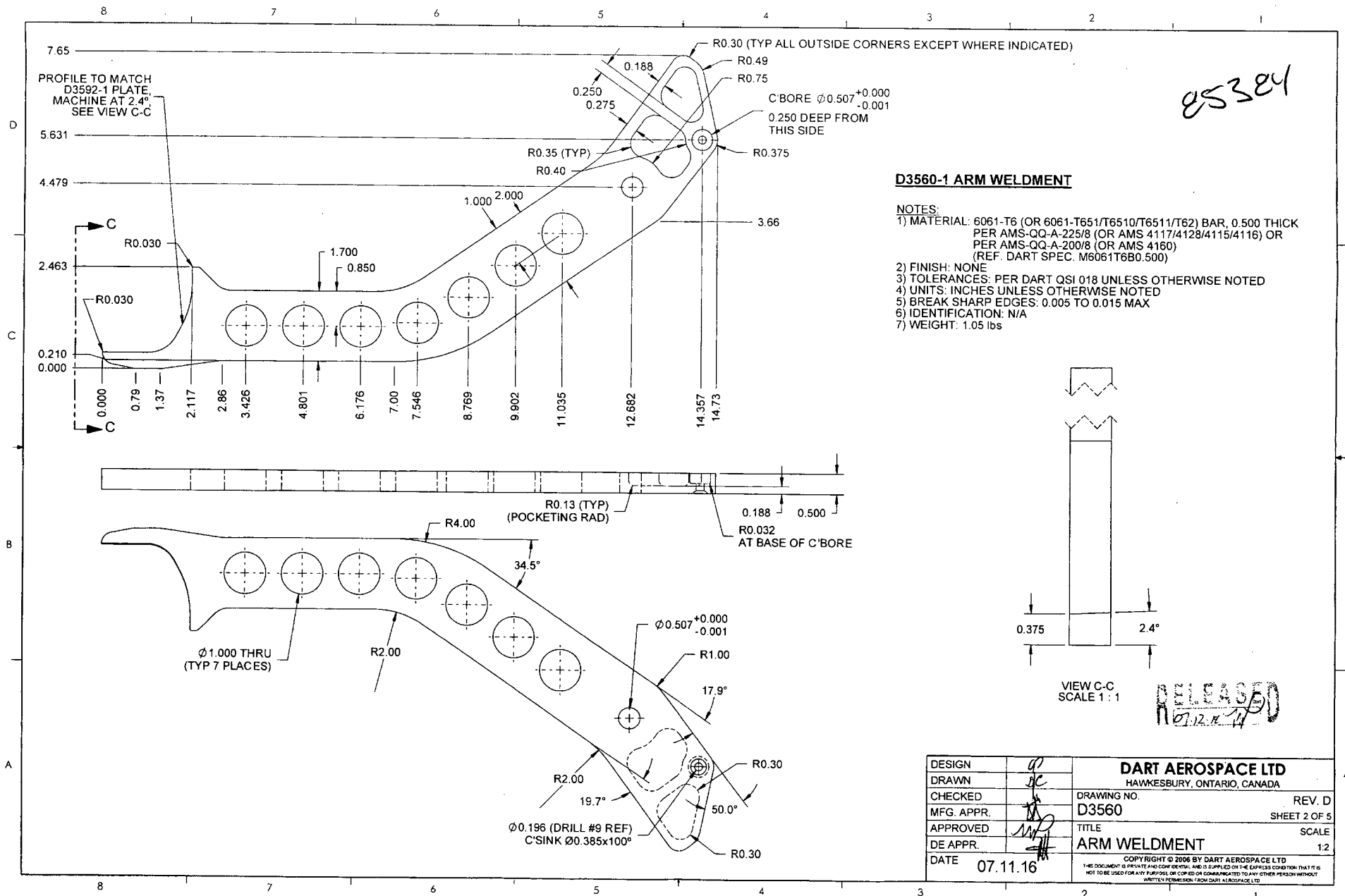
- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.23 lbs (TYP)
 - 8) WELDING: PER DART QSI 004

D	ADD D2808 PRESS FIT NOTE: REDRAWN IN SOLIDWORKS	DC	07.11.16
C	REMOVE POWDER COAT	CP	07.06.19
B	REDESIGN AS WELDMENT, ADD POCKETS	CP	07.01.15
A	NEW ISSUE	CP	06.09.25
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	07.11.16		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

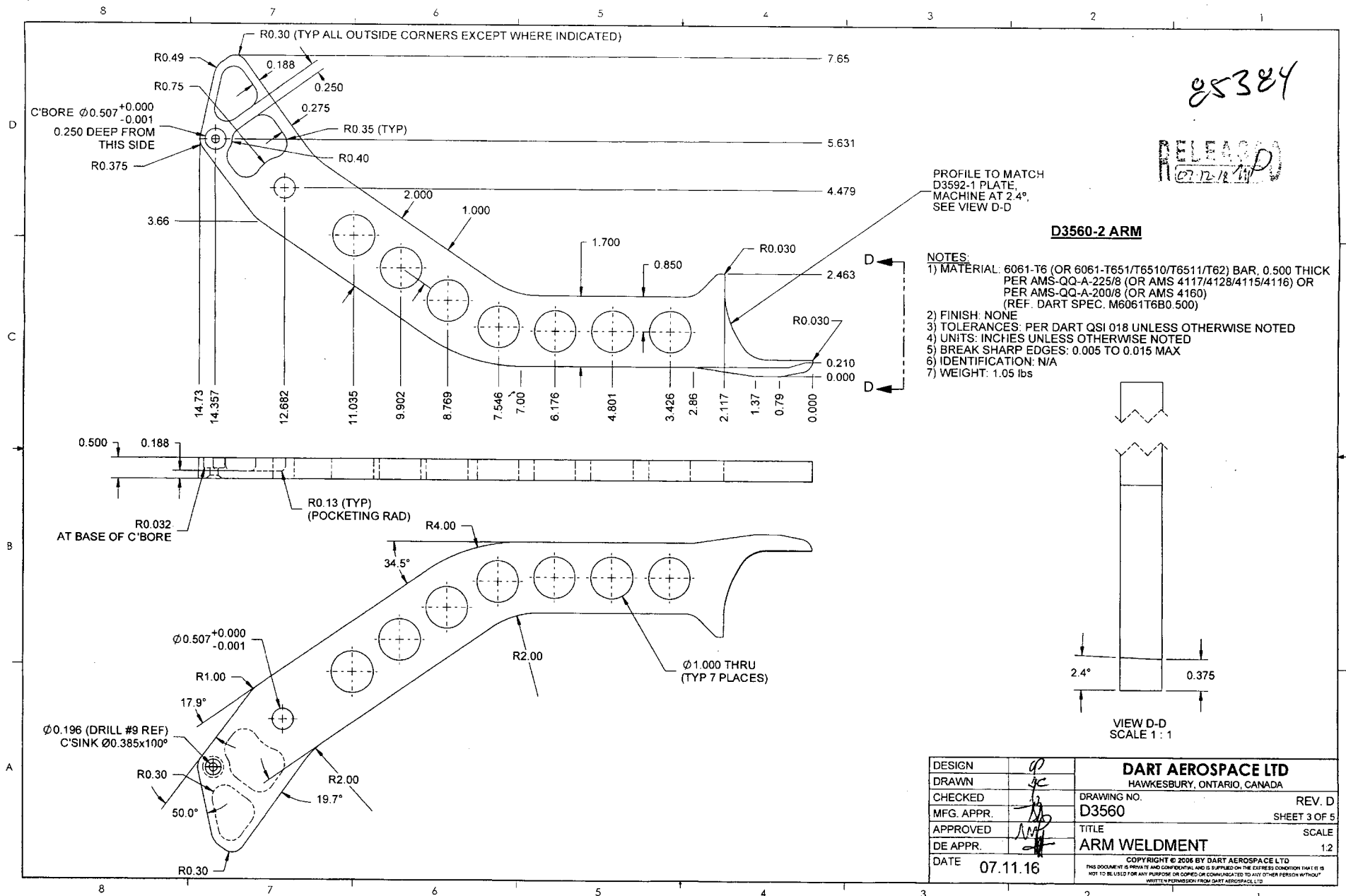
DRAWING NO. D3560
REV. D
SHEET 1 OF 5
TITLE
ARM WELDMENT
SCALE
1:4

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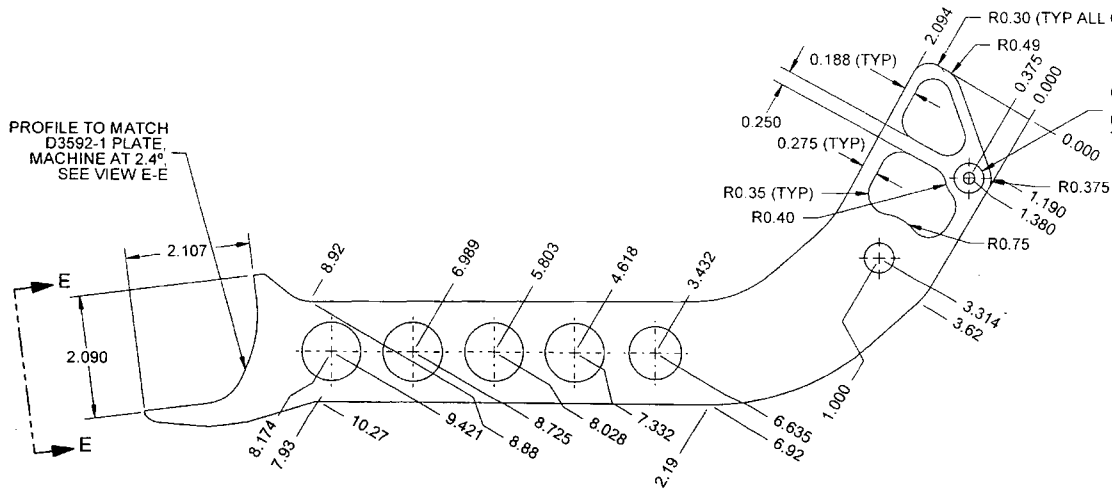
D3560-1 ARM WELDMENT

- NOTES:
- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.500)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.05 lbs



85384

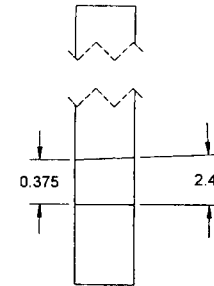
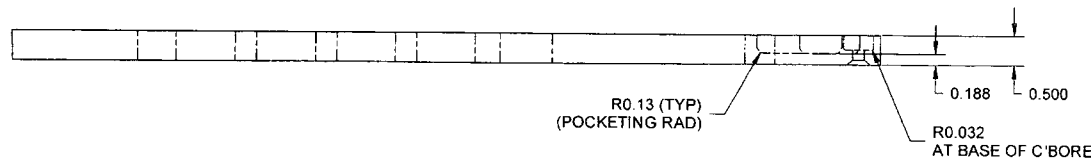
PROFILE TO MATCH
D3592-1 PLATE
MACHINE AT 2.4°
SEE VIEW E-E



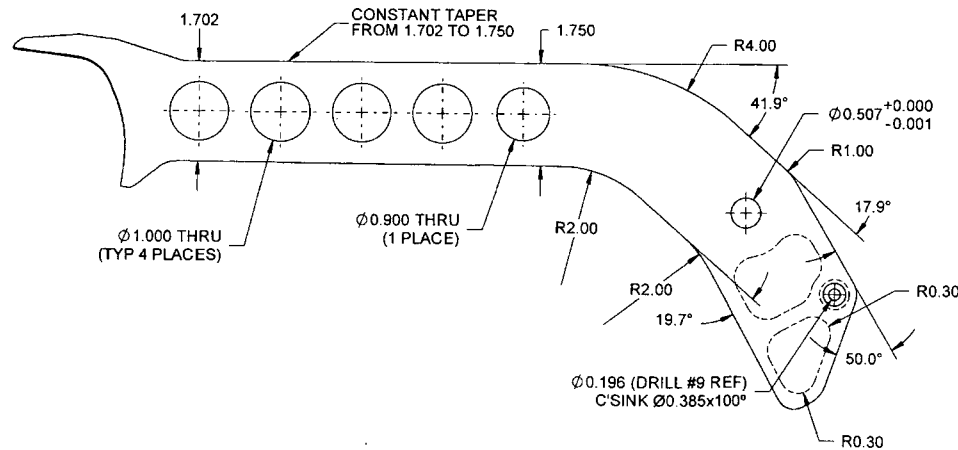
D3560-3 ARM

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.500)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.05 lbs



VIEW E-E
SCALE 1:1



RELEASED
107-12-14/140

DESIGN	42	DART AEROSPACE LTD	
DRAWN	4C	HAWKESBURY, ONTARIO, CANADA	
CHECKED	4C	DRAWING NO.	REV. D
MFG. APPR.	4C	D3560	SHEET 4 OF 5
APPROVED	4C	TITLE	SCALE
DE APPR.	4C	ARM WELDMENT	1:2
DATE	07.11.16	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

